BELYAYEVA, M.Ya.

Helminths of mammals of the Byalovezhska Pushcha. Trudy VIGIS 6:100-114 '59. (MIRA 15:5)
(Byalovezhska Pushcha--Worms, Intestinal and parasitic)
(Parasites--Mammals)

BELYAYEVA, M. Ya. Cand Vet Sci -- (diss) "Helminthofauna of mammals of the Belovezhskaya Pushcha, and observations of the epizootology of certain ~~types~~ ~~of~~ helminthoses." Mos, 1958. 16 pp (All-Union Order of Lenin Acad Agr Sci im V. I. Lenin. All-Union Inst of Helminthology im Academician K. I. Skryabin), 140 copies (KL, 11-58, 120)

BELYAYEVA, M.Ya., nauchnyy sotrudnik.

Problem of a natural reservoir in trichinosis. Veterinariia 32 no.1:39-40 Ja '55. (MIRA 8:2)

1.Gosudarstvennyy zapovednik "Belovezhskaya pishcha".
(TRICHINA AND TRICHINOSIS)

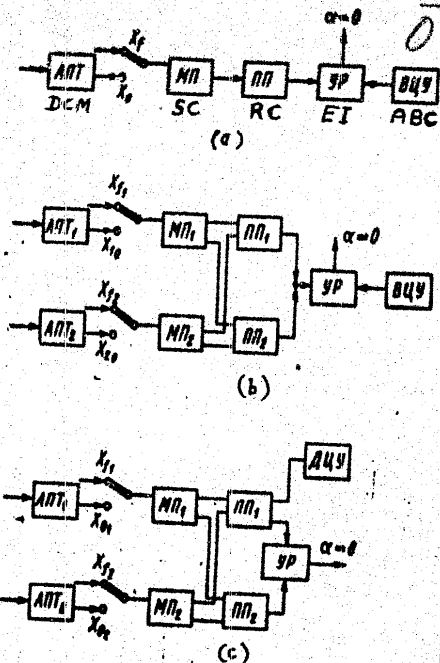
BELYAYEVA, M.Ya.

Natural sources of Trichinella in the ragion of Belovezhskaya Pushcha. Zool.zhur. 33 no.3:714-715 My-Je '54. (MLRA 7:7)

1. Zapovednik "Belovezhskaya Pushcha"
(Bialowiesa forest--Trichina and trichinosis) (Trichina and trichinosis--Bialowiesa forest)

L 14025-66
ACC NR: AP6000029

equivalent. An equilibrium indicator (EI) or balance detector is represented by a microvoltmeter and an amplifier. This outfit permits checking 0.1%-error instruments at 0.05—2.5 kc, 0.2%-error instruments at 2.5—20 kc, and low-power-factor wattmeters having 1.5% error at 0.05—10 kc. Orig. art. has: 2 figures.



SUB CODE: 09 / SUBM DATE: none / ORIG REF: 007

Card 2/2

L 14025-66 EWT(1)/EEC(k)-2/EWA(h)
ACC NR: AP6000029 SOURCE CODE: UR/0115/65/000/010/0008/0011

AUTHOR: Bezikovich, A. Ya.; Belyayeva, M. S.; Zorin, D. I.; Eskin, S. P. 35 B

ORG: none

TITLE: Universal high-accuracy outfit for checking ammeters, voltmeters, and wattmeters at acoustic frequencies 25

SOURCE: Izmeritel'naya tekhnika, no. 10, 1965, 8-11

TOPIC TAGS: acoustic frequency, measuring instrument

ABSTRACT: New equal-quantity comparators are described in which the a-c measurand and the corresponding d-c quantity are applied to a receiving converter (RC, see fig. below). Three block diagrams of comparators are shown: (a) for current and voltage; (b) for power with a square-law control of converters, and (c) for power with a low power factor using the method of equal temperatures. The measurand X_1 (or X_{f1} X_{f2} for power) is compared with its equivalent d-c value X_0 (or X_{01} X_{02}) by means of RC and SC (scale converters). Full equilibrium is attained by an auxiliary balance circuit (ABC). A d-c meter (DCM) serves to measure the d-c

Card 1/2 UDC: 621.317.714.089.6 + 621.317.725.089.6 + 621.317.784.089.6

2

FRIDMAN, Ye.I., inzh.; BELYAYEVA, M.N., inzh.; VEYNER, A.A., inzh.; GUBANOVA, N.F., inzh.

Properties of some heat-resistant lacquers and glues. Vest.elektroprom. 31 no.6:31-37 Je '60. (MIRA 13:7)
(Lacquer and lacquering--Thermal properties)
(Glue--Thermal properties)

BELYAYEV, K.T.; BELYAYEVA, M.M., agronom

Crop rotation which includes row crops is the basis for high spring wheat yields. Zemledelie 24 no.2 p.16-22 F '62.
(MIRA 15:3)

1. Zaveduyushchiy Krasnoshchekovskim sortoispytatel'nym uchastkom, Altayskiy kray (for Belyayev).
(Wheat) (Rotation of crops)

BELYAYEVA, M.I.; KYUNE, M.F.; NUZHINA, A.M.; Prinimala uchastiye: RYAZANTSEVA, I.N., studentka IV kursa

Effect of bacterial deoxyribonuclease on Ehrlich ascitis tumor cells in in vitro experiments. Vopr. onk. 9 no.4:79-85 '63. (MIRA 17:9)

1. Kazanskiy gosudarstvennyy universitet imeni Ul'yanova-Lenina. Adres avtorov: Kazan', ulitsa Lenina, 18, Gosudarstvennyy universitet.

BELYAYEVA, M.I.; NUZHINA, A.M.

Study of the action of bacterial desoxyribonucleases on Ehrlich ascites carcinoma in experiments in vitro. Vop.onk. 8 no.8:62-65 '62. (MIRA 15:9)

1. Iz laboratorii po izucheniyu zlokachestvennogo rosta pri Nauchno-issledovatel'skom khimicheskom institute im. Butlerova (zav. - d-r biol.nauk M.I. Belyayeva) Kazanskogo gosudarstvennogo universiteta im. V.I. Ul'yanova-Lenina.
(DEOXYRIBONUCLEASE) (CANCER RESEARCH)

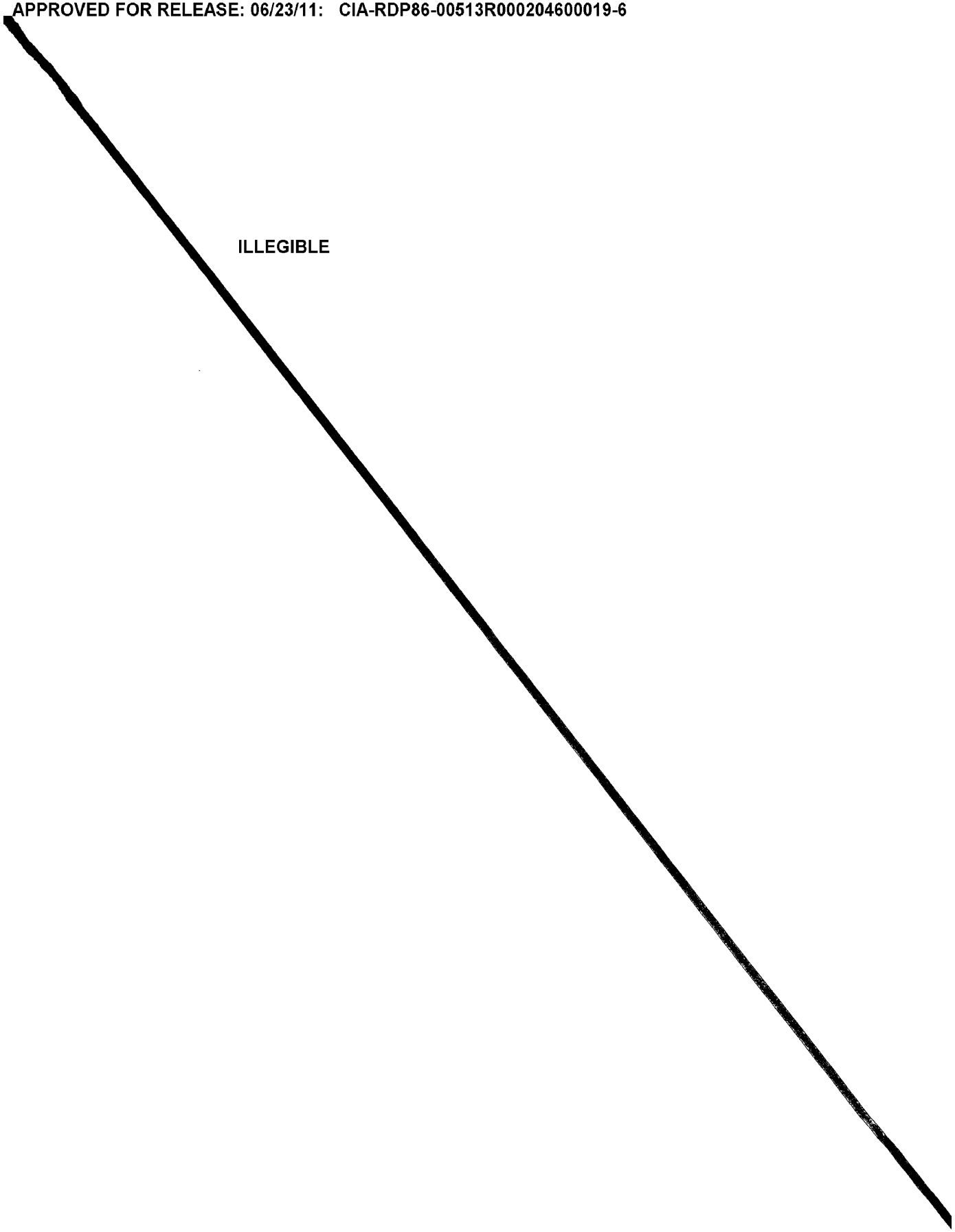
HELYAYEVA, M.I.

Chemosynthesis in hydrogen bacteria. [with summary in English].
Mikrobiologiia 27 no.5:547-555 S-O '58 (MIRA 11:12)

1. Kazanskiy gosudarstvennyy universitet imeni V.I. Ul'yanova-Lenina.

(BACTERIA, metab.
chemosynthesis in hydrogen bact. (Rus))

ILLEGIBLE



BELYAYEVA, M.I.

Production of methane from hydrogen and carbon dioxide by cultures of Pseudomonas pantotropha and Bacillus hydrogenes. Uch. zap.Kaz. un. 114 no.1:19-22 '54. (MLRA 10:3)

1. Kafedra fiziologii rasteniy i microbiologii.
(Methane) (Bacteria)

BELYAYEVA, M.I.

MD

The assimilation of molecular nitrogen by hydrogen bacteria. M. I. Belyaeva. *Uchenye Zapiski Kazan. Univ.* 114, No. 1, [illegible] (1954); *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 8974.—*Bacillus hydrogenes* cultured on a mineral N-free medium in an atm. contg. H and CO_2 fixed atm. N at the rate of 0.08–0.13 mg./500 ml. On N-free medium contg. glucose and in the absence of H, the rate of N fixation was 0.85–2.0 mg./g. of glucose. A study of the ratios of H, O, and CO_2 to the fixed N indicated that N is being fixed by the hydrogen bacteria according to the scheme of M. V. Fedorov (*Biol. Fiksatsiya Azota Atmosfery*, Sel'khozgiz, 1948) via a primary fixation product similar to hydrazine rather than via the formation of NH_2OH. Liberated O is immediately converted into H_2O by molecular H.

B. S. Levine

BELYAYEVA, M.I.

MD

/Carbon dioxide assimilation and the role of phosphates in autotrophic carbon dioxide assimilation by hydrogen bacteria. M. I. Belyaeva. *Uchenye Zapiski Kazan. Univ.* 114, No. [illegible] 1954. *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 6167.—Hydrogen bacteria such as *Pseudomonas pantotropha*, *Bacillus hydrogenes*, and *Mycobacterium album*, cultured on mineral medium free from organic matter and in an atmosphere of H_2, O_2, and CO_2, consumed 2.4–3.8 ml. H/ml. O. This indicated that H was oxidized not only into H_2O but also in the synthesis of cellular organic substances. The vol. of O consumed by the bacterial cells corresponded to the vol. of CO_2 consumed. The H of H_2O possibly does not play a part in the reduction of CO_2. In the absence of CO_2 in 15 hrs. the bacteria consumed 1.9–2.6 ml. H/ml. O, which indicated that under these conditions H was completely oxidized into H_2O. In CO_2 atmosphere (and no organic matter) its assimilation is apparently realized at the expense of the energy of the H oxidation. The chemosynthetic assimilation of CO_2 was accomplished in two stages. In the first stage the organic P and adenosinetriphosphate (ATP) increased in the suspension, and in the second the inorganic P increased at the expense of the organic P and ATP.

B. S. Levine

BELYAYEVA, M. I.

"Physiology and Ecology of Hydrogen Bacteria." Sub 19 Apr 51, Inst of Microbiology, Acad Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

ANI[illegible], V.P.; [illegible]ELYAYEVA, N.G.; VLADIMIROVA, L.F.; GUTOVSKAYA, A.V.

Data on biochemical studies on the administration of paranitrophenyl ester of dibutylphosphinic acid to experimental animals. Nauch. trudy Kaz. gos. med. inst. 14:77-78 '64. (MIRA 18:9)

1. Kafedra biokhimii (zav. - dotsent L.F.Vladimirova) Kazanskogo meditsinskogo instituta.

BELYAYEVA, N. G.

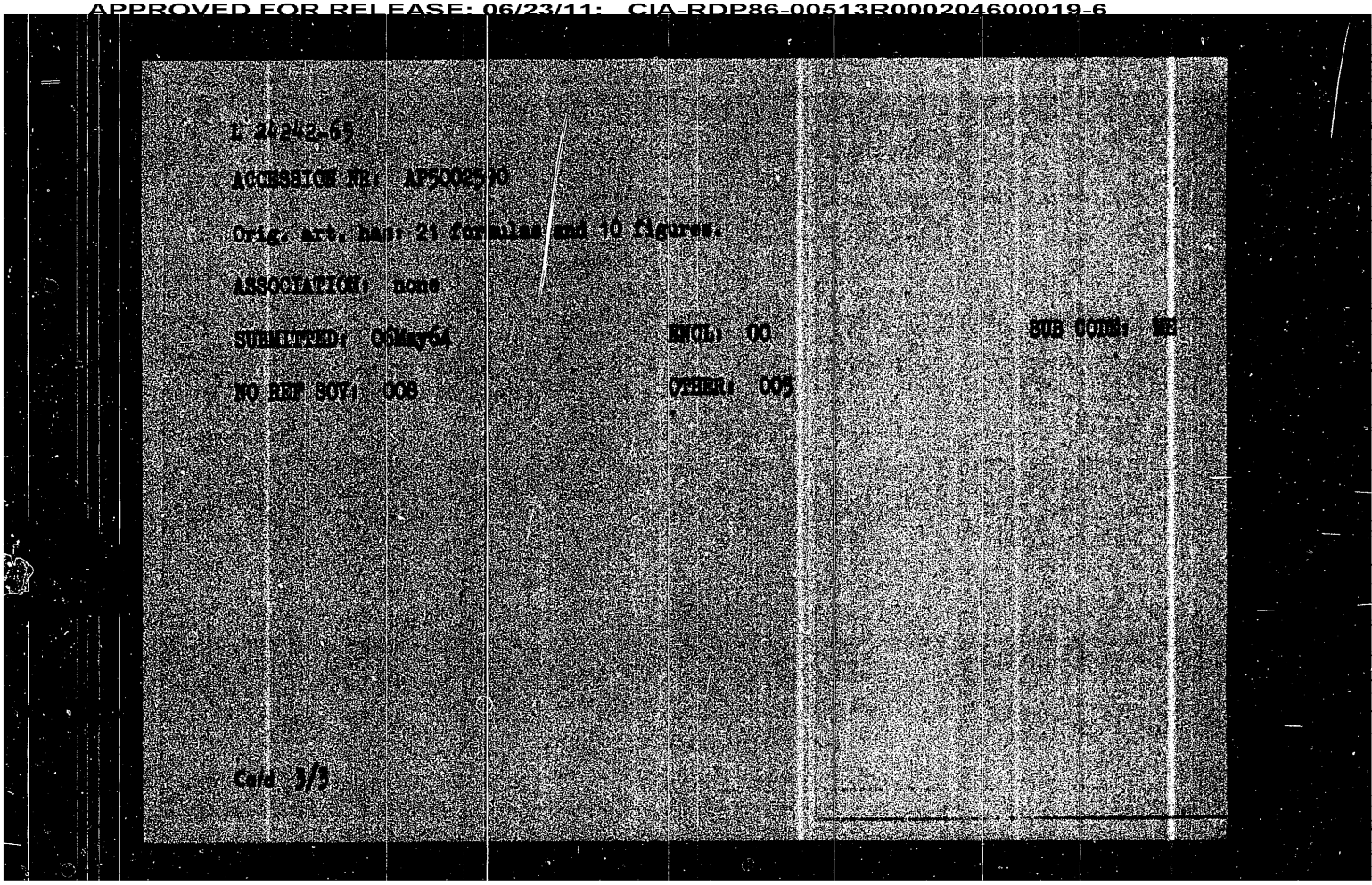
"Special Cases of the Riemann Problem and Systems of Singular Integral Equations." Cand Phys-Math Sci, Kazan' State imeni V. I. Ul'yanov-Lenin, Min Culture USSR, Kazan', 1953. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

S. N.; KHRISTIANSEN, G. B.; ABROSIMOV, A. M.; KHRENOV, DMITRIYEV, V. A.
VA, V. I.; SOLOVYEV, K.I.: BELYAYEVA, M.F.; NECHIN, Yu. A.; VEDENEYEV, O.N.;
OV, G. V.; FOMIN, Yu. A.

Summary of the new data on EAS structure obtained with the aid of the complex equipment of Moscow State University.

Paper submitted for the 8th Intl. Conf. on Cosmic Rays (IUPAP) Jaipur, India, 2-14 Dec 1963



L 26242-65

ACCESSION NR: AP5002590

Orig. art. has: 21 formulas and 10 figures.

ASSOCIATION: none

SUBMITTED: 06May64 ENCL: 00 SUB CODE: ME

NO REF SOV: 008 OTHER: 005

Card 3/3

L 24242-65

ACCESSION NR: AP5002190

coefficient, ρ_1 and ρ_2 are the densities of the two fluids, z is the distance along the vertical, and Δ is a Lagrange multiplier. If r is the radius of curvature of the surface, the following equations can be derived: $b = \frac{ng(\rho_2 - \rho_1)}{\sigma_{12}}$;

$$\lambda = \frac{\Delta}{\sigma_{12}}; \quad R' = -W'\left(sW - \frac{W'}{R}\right); \quad W' = R'\left(sW - \frac{W'}{R}\right); \quad \left(R'^2 + W'^2 = 1, \; ' = \frac{d}{ds}\right);$$

$$R = \sqrt{|b|}\, r, \quad W = \sqrt{|b|}\, w \quad (w = z + \lambda/b); \quad \left(\frac{RW'}{\sqrt{1+W'^2}}\right)' - sRW = 0, \quad s = \begin{cases} +1 & (b > 0) \\ -1 & (b < 0) \end{cases}.$$

The last equation has a singularity at R = 0 similar to that of a Bessel equation. A power series solution for W is obtained in the following form:

$$W(R) = W_0 + \frac{sW_0}{4} R^2 + \frac{W_0 + sW_0^2}{64} R^4 + \frac{2sW_0 + 20W_0^2 + 27sW_0^3}{460} R^6 + \ldots$$

$$(W_0 = W(0))$$

Specific examples have been worked out to illustrate the method of obtaining the contour of the surface of separation. The authors thank L. A. Sobozhanin for his collaboration in obtaining part of the results, and also N. N. Moiseyev for the comments which were taken into consideration in the final revision of this paper.

Card 2/3

L 24242-65 EWT(1)/EWP(m)/EEC(t)/T Po-4/Pq-4/Pg-4/Pi-4 IJP(c) WW

ACCESSION NR: AP5002390 S/0179/64/000/005/0039/0046

AUTHORS: Belyayeva, M. A. (Khar'kov); Myshkis, A. D. (Khar'kov); Tyuptsov, A. D. (Khar'kov)

TITLE: Hydrostatics in weak gravitational fields. Equilibrium form of liquid surfaces

SOURCE: AN SSSR. Izvestiya. Mekhanika i mashinostroyeniye, no. 5, 1964, 39-46

TOPIC TAGS: hydrostatic equilibrium, weak field, gravitational field, surface tension, Euler equation, Bessel equation

ABSTRACT: The problem of determining the equilibrium form of the free surface of a liquid, taking into account the surface tension effect in a weak gravitational field, was investigated. A surface separated by two immiscible, incompressible, homogeneous fluids was considered. The condition for equilibrium can be obtained from a variational principle for the potential energy. The Euler equation for this problem takes the form $\sigma_{12}(k_1 + k_2) = \kappa g(\rho_2 - \rho_1)z + \Lambda$, where σ_{12} is the coefficient of surface stress, k_1 and k_2 are the inclinations to the vertical of the principal normals at the points under consideration, κ is a dimensionless transfer

Card 1/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600019-6

POSTNIKOV, I.S.; BELYAYEVA, M.A.; FROLOV, F.A.; IVANOVA, O.D.

Study of methods for improving the active sludge regeneration process in air tanks. Nauch. trudy AKKH no.20:12-22 '63.
(MIRA 18:12)

POSTNIKOV, I.S.; KHARITONOV, D.F.; KOMAROVA, N.P.; BELYAYEVA, M.A.

Purification of city waste water in high biofilters. Nauch. trudy AKKH no.20:23-39 '63. (MIRA 18:12)

POSTNIKOV, I.S.; BELYAYEVA, M.A.; TSITOVICH, S.I.

Horizontal primary clarifiers and activated sludge precipitation tanks. Sbor. nauch. rab. AKKH no.6:36-51 '61. (MIRA 15:3)
(Sewage--Purification)

BELYAYEVA, M. A.; MYSHKIS, A. D.; SLOBOZHANIN, L. A.; TYUPTSOV, A. D. (Khar'kov)

"On the equilibrium forms of liquids in capillary vessels"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 1964.

BELYAYEVA, M.A., kandidat meditsinskikh nauk

Tuberculosis of the brain stem diagnosed on the basis of otoneurological data. Vest.oto-rin. 18 no.5:105-106 S-O '56. (MLRA 9:11)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - prof. V.G.Yermolayev) Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey imeni S.M.Kirova.

(TUBERCULOSIS, case reports
brain stem)
(BRAIN STEM, dis.
tuberc.)

BELYAYEVA, M.A.

Tonsillitis and appendicitis. Vest. otorinolar., Moskva 15 no.4:52-56 July-Aug 1953. (CLML 25:1)

1. Candidate Medical Sciences. 2. Of the Department of Diseases of the Ear, Throat, and Nose (Head -- Prof. V. G. Yermolayev) and of the Department of Surgery (Head -- Prof. N. N. Samarin, Corresponding Member of the Academy of Medical Sciences USSR), Leningrad Order of Lenin Institute for the Advanced Training of Physicians.

BELYAYEVA, M.A.

Treatment of para-tonsillar abscess with tonsilectomy. Vest. otorinolar. 12 no.2:52-57 Mr-Ap '50. (CLML 19:2)

1. Of the LOR (Otorhinolaryngological) Clinic imeni L.T.Levin (Acting Head of Department -- Prof. I.M.Rozenfel'd), Leningrad State Order of Lenin Institute for the Advanced Training of Physicians imeni S.M.Kirov (Director -- Prof. G.A.Znamenskiy).

BELYAYEVA, L.Yu. [Bieliaieva, L.IU.]

Development of male and female gametophytes, pollination, and fertilization in Crambe abyssinica Hochst. Ukr. bot. zhur. 20 no.6:24-31 '63. (MIRA 17:2)

1. Zaporozhskiy farmatsevticheskiy institut, kafedra farmakologii i botaniki.

BELYAYEVA, L.Ye. [Bieliaieva, L.IU.]

Cytoembryological investigation of the development of the seeds of Crambe abyssinica Hochst. and the accumulation of ergastic substances in them. Ukr. bot. zhur. 21 no.1:58-66 '64. (MIRA 17:3)

1. Zaporozhskiy farmatsevticheskiy institut, kafedra farmakognozii i botaniki.

KATS, M.Ya.; BELYAYEVA, L.V.

Some physicochemical constants of heavy liquids used in the study of minerals. Izv.AN SSSR.Ser.geol. 27 no.3:100-113 Mr '61. (MIRA 15:2)

1. Geologicheskiy institut AN SSSR, Moskva.
(Liquids--Analysis) (Viscosity)

BELYAYEVA, Lidiya Tikhonovna; NEKHLYUDOVA, A., redaktor; PETROVA, M., tekhnicheskiy redaktor.

[Botanical excursions; teachers' handbook] Botanicheskie ekskursii v prirodu; posobie dlia uchitelei. Moskva, Gos.uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 244 p.(MLRA 8:11)
(Botany--Study and teaching)

BELYAYEVA, L.S.

Characteristics of fractional distribution of sulfur in the component analysis of bitumens. Trudy VNIGRI no.155:97-125 '60.
(MIRA 14:1)

(Bitumen--Analysis) (Sulfur)

[redacted] BELYAYEVA, L.N.

KAZANTSEVA, T.I.; BELYAYEVA, L.N.

Using products of casein dicomposition in silicosis. Gov.med. 21 Supplement:26 '57. (MIRA 11:2)

1. Iz Sverdlovskogo instituta gigiyeny truda i professional'nykh zabolevaniy.
(LUNGS--DUST DISEASES) (METHIONINE)

BELYAYEVA, L.N.

Motion-picture projection lenses. Tekh.kino i telev. 4 no.8:75-78 Ag '60. (MIRA 13:8)
(Motion-picture projectors)
(Lenses)

BARANOV, V.I.; PAVLOTSKAYA, F.I.; FEDOSEYEV, G.A.; TYURYUKANOVA, E.B.; RODIONOVA, L.M.; BABICHEVA, Ye.V.; ZATSEPINA, L.N.; VOSTOKOVA, T.A.; Prinimali uchastiye: YEMEL'YANOV, V.V.; BELYAYEVA, L.I.; LEVKINA, N.I.; MOLCHANOVA, I.V.

Distribution of Sr^{90} on the surface horizon of soils of the Soviet Union during 1959-1960. Atom. energ. 18 no.3:246-250 Mr '65. (MIRA 18:3)

BELYAYEVA, L.I.

Atlas of foreign countries for secondary schools. Geod.i kart. no.2:61-63 F '62. (MIRA 15:3)
(Atlases, Russian)

BRIGGER, L.I., otv.red.; BELYAYEVA, L.I., red.

[Atlas of foreign countries for secondary schools; a course in economic geography] Atlas zarubezhnykh stran dlia srednei shkoly; kurs ekonomicheskoi geografii. Moskva, 1959. 40 p. (MIRA 13:7)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.

(Atlases)

ITENBERG, I.M., red.; BELYAYEVA, L.I., red.; GRACHIKOVA, V.I., red.; PEKHOVA, Z.P., red.; ROSTOVTSEVA, Ye.P., red.; BUKHANOVA, A.V., tekhn.red.; CHEKANIKHIN, S.M., tekhn.red.

[World atlas] Atlas mira. Moskva, 1958. 135 p. (MIRA 11:9)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.
(Atlases)

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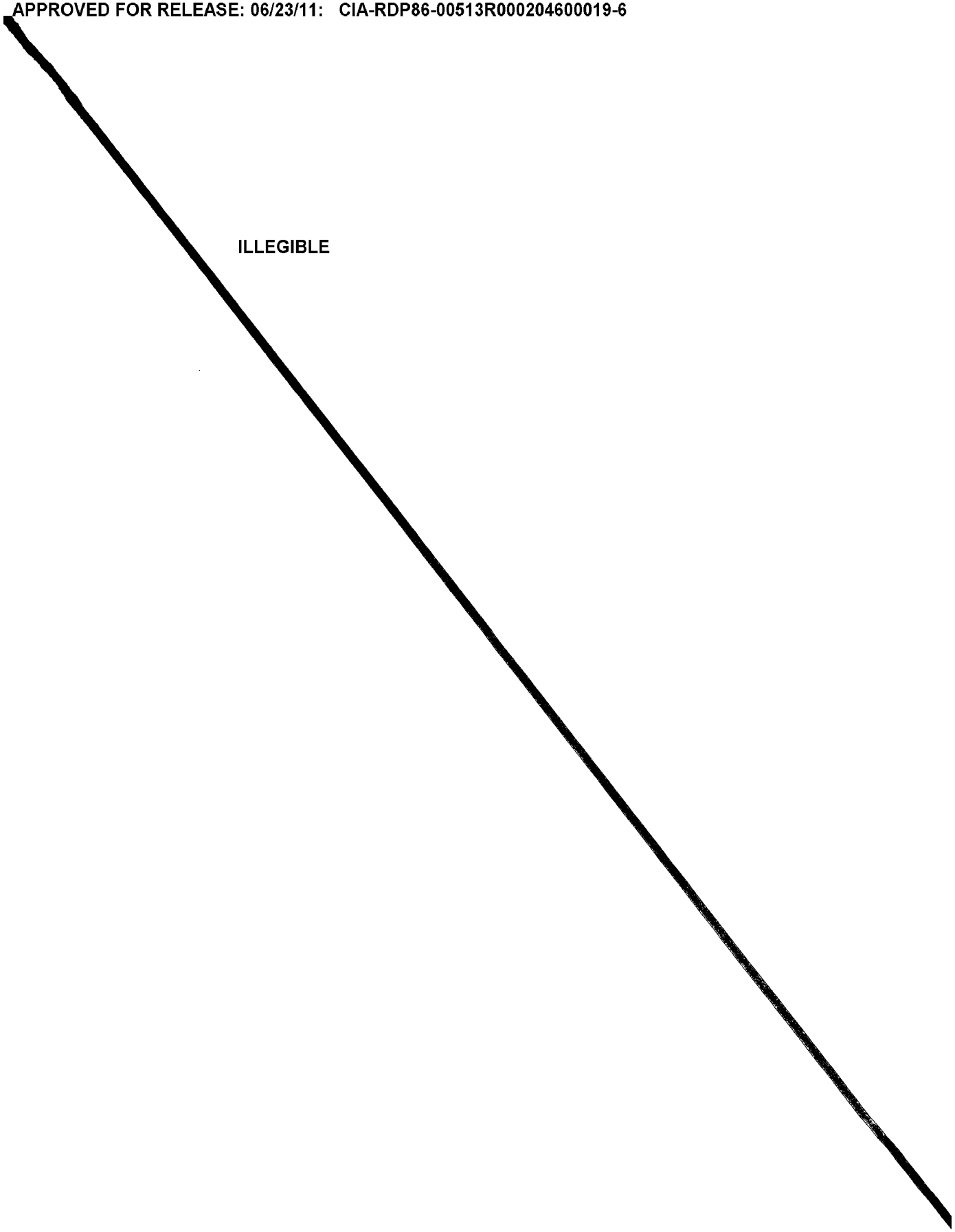

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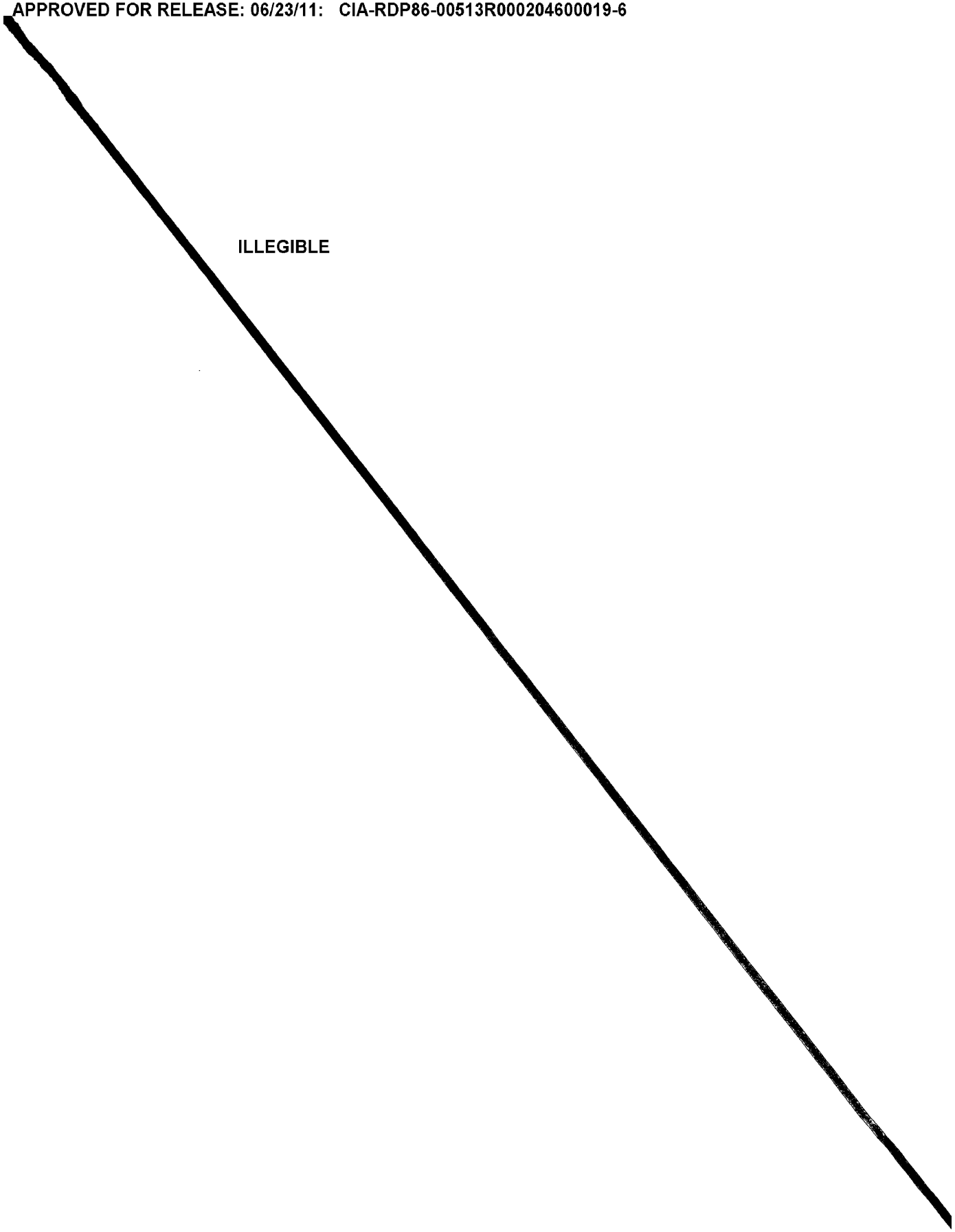

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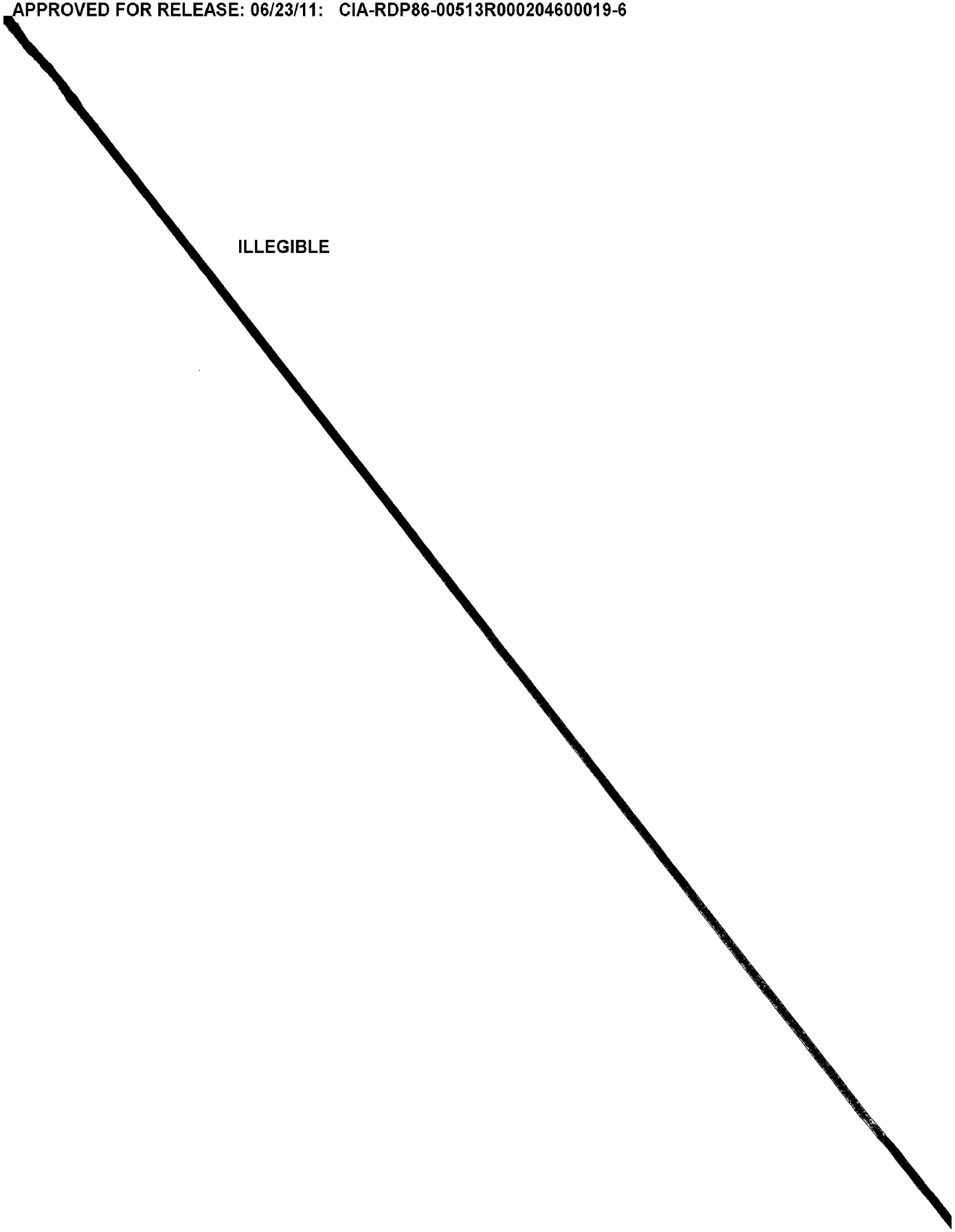


BELYAYEVA, L.I.

[A study by spectrophotometric methods of the interaction between uranium (6) and vanadium (5) in solution; abstract of a dissertation for the degree of candidate of the chemical sciences] Issledovanie vzaimodeistviia mezhdu uranom (6) i vanadiem (5) v rastvore spektrofotometricheskimi metodami; avtoreferat dissertatsii na soiskanie uchenoi stepeni kandidata khimicheskikh nauk. Leningrad, Leningradskii univ., 1956. 13 p. (MLRA 10:1)
(Uranium) (Vanadium)

BELYAYEVA, L. I.

BELYAYEVA, L. I.: "Investigation of the interaction between uranium (6) and vanadium (5) in solution, using spectrophotometric methods." Leningrad Order of Lenin State U imeni A. A. Zhdanov. Leningrad, 1956. (Dissertations for the Degree of Candidate in Chemical Science.)

SO: Knizhnaya letopis', No. 37, 1956. Mosow.

ITENBERG, I.M., redaktor; BELYAYEVA, L.I., redaktor; GRACHIKOVA, V.I., redaktor; PEKHOVA, Z.P., redaktor; ROSTOVTSEVA, Ye.P., redaktor; BUKHANOVA, N.I., tekhnicheskiy redaktor; LIFSHITS, N.I., tekhnicheskiy redaktor; SIMANOVSKIY, A.Ya., tekhnicheskiy redaktor

[World atlas] Atlas mira. Moskva, 1955. 136 p. maps. (MLRA 8:7)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.
(Atlases)

SKLYARENKO, S.I.; SMIRNOV, I.V.; BELYAYEVA, L.B.; MALYSHEVA, Ye.A. (Moscow)

Microviscosimeter. Zhur. fiz. khim. 34 no.4:921-924 Ap '60.
(MIRA 14:5)

(Viscosimeter)

A Simple Apparatus for Establishing Pressures of Preset Values up to 200 Atmospheres

S/076/60/034/05/33/038
B010/B003

can be used additionally. By means of this device a pressure of 217 atm (critical pressure) can be obtained with water heated to the critical temperature (374.15°C). The pressure to be attained can be calculated from the pressure of saturated steam at a given temperature listed in respective tables. There are 1 figure and 1 Soviet reference.

SUBMITTED: July 3, 1959

Card 2/2

S/076/60/034/05/33/039
B010/B003

AUTHORS: Sklyarenko, S. I., Smirnov, I. V., Belyayeva, L. B., Malysheva, Ye. A.

TITLE: A Simple Apparatus for Establishing Pressures of Preset Values up to 200 Atmospheres

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 5, pp. 1136-1137

TEXT: A simple apparatus for establishing pressures up to 200 atm in small sealed vessels is described. The device (Fig.) is a hermetically sealed steel cylinder with a screwed-on cover and thermometer. The bottom of the cylinder ends in a capillary tube which is introduced into the vessel in which the pressure is to be established. The cylinder is filled with water and put in an oven. The vapor pressure of the water presses it through the capillary tube and produces the required pressure in the vessel. If the pressing-in of the water into the vessel is to be avoided, an intermediate vessel filled with mercury (or another liquid)

Card 1/2

The Determination of the Saturated Vapor Pressure of Low Volatile Substances

vidual determinations. There are 6 figures and 17 references, 5 of which are Soviet.

SUBMITTED: March 25, 1957

76-32-8-31/37

AUTHORS: Sklyarenko, S. I., Markin, B. I., Belyayeva, L. B.

TITLE: The Determination of the Saturated [illegible]apor Pressure of Low Volatile Substances (Opredeleniye davleniya nasyshchennogo para maloletuchikh veshchestv)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 8, pp. 1916-1921 (USSR)

ABSTRACT: The most interesting type of the determinations mentioned in the title is the effusion method. Among others also Swan and **Mack** (Svan and Mek) (Ref 2) and Zil'berman-Granovskaya (Ref [illegible]) employed this method. In the present case the measurements were carried out at different temperatures in an apparatus, the diagram of which is given. It consists of a glass tube with a quartz balance and a platinum foil with small holes through which the effusion takes place. The saturated vapor pressures of naphthalene, iodine, nitro-benzene, phenol and orthonitro phenol were measured. The experimental conditions, the calculation formulae and the data obtained together with their graphical representation are given for the indi-

Card 1/2

L 47293-66

ACC NR: AP6031663

only in the level and dynamics of changes caused. The combined effect of irradiation and dynamic factors either did not exceed or was less than the effect of each of the indicated factors separately, a phenomenon seen as a radioprotective action of dynamic factors. The relations observed are similar to phenomena of dominance and parabiosis. Typical radiation reactions were intensified when irradiation was combined with factors having directly opposed effects. The variation and complexity of results of the combination of dynamic factors and irradiation are explained by the multiplicity of the mechanisms of the combined effect of radiation and nonradiation factors. The combined exposure to vibration and whole-body acute irradiation at a lethal dose showed that in a majority of cases the vibration effect on metabolism and CNS function was dominant at early stages, while that of irradiation prevailed at later stages. At the latest stages of exposure, the combined effect of vibration and irradiation was diverse and complicated. According to some indices, the trend of changes corresponded to the effect of one of the factors while the dynamics of the processes reflected the effect of the other one. Under the uniform action of both factors, the phenomena of partial summation of weakening of the radiation effect, and in several cases of a sharp increase of radiation effect by the opposite action of the vibration effect, were observed. Probable mechanisms of the phenomena described are considered. Orig. art. has: 13 figures.

[SW]

SUB CODE: 06/ SUBM DATE: 14Dec65/ ORIG REF: 032/ OTH REF: 008/ ATD PRESS: 5095

Card 3/3

increased by training. Participation of CNS reflex mechanisms in these processes is probable. The 15-min exposure of guinea pigs to radial accelerations (8 G), centrifuged twice with a one-day interval, increased the spontaneous bioelectrical activity of extensor muscles; however, the effect was not lasting. It was lowered the day after the second centrifugation and was essentially the same as the control from the sixth day. The 15-min exposure of the animals to vibrations (70 cps, 0.4 mm amplitude), twice with a one-day interval, produced less distinct but more stable changes, with normalization more than 25 days after the first vibration exposure. Changes in myoelectric activity during spaceflight (Sputnik-4) incorporated features of both acceleration and vibration effects, appreciably exceeding them in intensity. Oxidation processes in brain tissues, judged by PO_2 and "oxygen test" results, were initially increased in intensity by the effect of vibrations (using the above parameters), and subsequently underwent phase changes, including depression of oxidation metabolism during the aftereffect period. Changes in unconditioned defense and vestibulotonic reflexes and upper nervous activity were observed later than 12 days after vibration. Inhibition of food-procuring conditioned and defensive unconditioned reflexes in the majority of animals, with pronounced paralytic phenomena, was also found. Exposure to 8-, 10-, and 20-G accelerations and vibration (700 cps, 0.005 mm, 60 min) resulted in decreased mitotic activity of bone-marrow cells for 30 days. Disturbances of cell division involved chromosomal stickiness and increase in the number of chromosomal aberrations. Ionizing radiations and the above dynamic factors produced a similar effect on oxidation metabolism in brain tissues and cellular division in hematopoietic organs. They differed

L 47293-66 EEC(k)-2/EWT(1)/FCC/FSS-2 SCTB TT/DD/RD/GW

ACC NR: AP6031663 SOURCE CODE: UR/0216/66/000/005/0625/0643

AUTHOR: Frank, G. M.; Livshits, N. N.; Arsen'yeva, M. A.; Apanasenko, Z. I.; Belyayeva, L. A.; Golovkina, A. V.; Klimovitskiy, V. Ya.; Kuznetsova, M. A.; Luk'yanova, L. D.; Meyzerov, Ye. S.

ORG: Institute of Biological Physics, AN SSSR (Institut biologicheskoy fiziki AN SSSR)

TITLE: The combined effect of spaceflight factors on some functions of the organism

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 5, 1966, 625-643

TOPIC TAGS: central nervous system, biologic oxidation, biologic metabolism, reflex activity, brain tissue, radiation effects, ~~ionizing~~ radiation biologic effect, ionizing radiation

ABSTRACT: Results of experiments studying the combined effect of spaceflight factors (acceleration, vibration, and radiation) on some functions of the organism (brain hemodynamcis, CNS functions, and cell division of hematopoietic organs) are discussed. Tolerance of the CNS to accelerations depends significantly on changes of brain hemodynamics during accelerations. Brain blood flow in rabbits subjected to centrifugal accelerations in the head-foot direction (5 G in head region and 10 G in pelvis region) for 12 to 60 sec decreased. This reaction was insignificant during the first exposure, sharply increased during repeated exposure, and weakened after chronic exposure, thus indicating that tolerance to accelerations can be

Card 1/3 UDC: 611.8:629.195.2

L 4506-66

ACC NR: AP5026060

tions in the bone-marrow cells of mice. In general, it was found that vibration and acceleration cause disruptions in the nuclei of bone-marrow and spleen cells. Another group of experiments on the combined effect of vibration or acceleration and radiation on the cell nucleus showed a general decrease in the radiation effect. Either of these factors, when applied prior to irradiation with x-rays (33 rad/min) or fast neutrons (11 rad/min), decreased the radiation effect in the following manner: They decreased the frequency of chromosome aberrations in bone-marrow cells by the second day after irradiation and decreased the frequency of chromosome aberrations in germ cells after 24 hr. However, the protective effect of vibration and acceleration depends not only on when the effect was exerted (prior to or after irradiation), but also on the time interval between the influence of these factors and subsequent irradiation. Analysis of the mechanism of the combined effect of these factors is a very complex problem and requires much more investigation. Orig. art. has: 10 tables and 1 figure. [JS]

SUB CODE: LS/ SUBM DATE: 03Apr64/ ORIG REF: 007/ OTH REF: 001/ ATD PRESS: 4130

Card 2/2

L 4506-66 EWT(1)/FS(v)-3 MVR/DD

ACC NR: AP5026060 SOURCE CODE: UR/0293/65/003/005/0796/0807

AUTHOR: Arsen'yeva, M. A.; Belyayeva, L. A.; Demin, Yu. S.; Pokrovskaya, G. I.; Golovkina, A. V.; Gavrilina, L. I.

ORG: none

TITLE: The effect of some space-flight factors on the hereditary structures of mammals

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 5, 1965, 796-807

TOPIC TAGS: animal genetics, biologic mutation, radiation biologic effect, radiation injury, vibration effect, acceleration effect

ABSTRACT: The effect on certain mammalian structures (bone marrow, spleen, and testes) of vibration and acceleration is studied, as independent factors and in combination with radiation. In the first series of experiments, mice were subjected to vibration with a frequency of 35 and 75 cps (amplitude 0.4 mm) for 15 min, 1 hr, and 4 hr. Experimental results showed an increase in the frequency of chromosome adhesions and an increased frequency of chromosome rearrangements in bone-marrow cells and spleen, together with adhesion of chromosomes in the metaphase of meiosis of testes cells. In the second series of experiments, mice were subjected to acceleration of 8 g for 5 and 15 min. This factor caused an increase in the frequency of chromosome adhesions, and some increase in the number of chromosome rearrangements and chromosome fragmenta-

Card 1/2 UDC: 629.198.61.591.15

09010007

L 14288-66

ACC NR: AT6003872

The changes in mitotic activity in bone marrow cell mitosis may reflect altered oxygen metabolism on the macro or cellular level or the effect of the physical factors tested on the sympathetic system and the secretion of adrenalin or noradrenalin. These two hormones tend to protect the organism from radiation but also depress mitotic activity. It is also possible that the physical factors themselves had a direct effect on the cellular mechanism. In general, however, it was felt that the various physiological changes occurring as a result of acceleration or vibration lead to disruptions of mitotic activity which may reflect a unique "protective" effect from radiation. Orig. art. has: 4 figures and 6 tables. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 009

Card 8/8

L 14288-66

ACC NR: AT6003872

Table 6. Effect on the bone marrow cells of mice of combined exposure to x-ray irradiation followed by centrifugation or vibration 24 hours later.

Dry killed after exposure	Actions*	Cells examined: All	Cells examined: No. of disruptions	% Disruptions	n	Chromosomal rearrangements, %: Bridges	Bridges with fragments	Fragments	% Rearrangement	n	% Adherence	Mitotic index
3rd	1	430	90	21,43±2,00		5,00	3,57	11,43	20,00±1,95		1,43±0,58	1,30
	2	430	80	18,60±1,88	1,0	2,53	0,40	12,88	16,03±1,76	1,4	2,56±0,76	1,90
	3	397	77	19,40±1,96	0,0	3,27	—	10,32	12,60±1,66	2,8	5,80±2,00	2,15
7th	1	620	121	19,21±1,57		8,90	1,43	7,79	12,12±1,51		1,11±0,41	2,30
	2	300	40	13,28±1,76	2,4	7,50	0,54	0,54	8,67±1,46	4,5	4,61±2,04	3,25
	3	310	46	14,04±1,66	2,1	4,81	1,65	0,59	12,61±1,78	2,9	1,43±0,63	2,77
15th	1	718	78	10,43±1,12		0,02	0,13	2,51	8,69±1,00		1,74±0,48	3,00
	2	337	37	10,98±1,70		7,54	0,58	1,45	9,79±1,62		1,19±0,59	2,88
	3	343	43	12,54±1,78		7,20	0,28	1,46	9,04±1,55		3,50±0,99	3,00
30th	1	678	68	10,03±1,15	3,1	6,64	0,20	2,36	9,29±1,11	4,9	0,74±0,33	2,29
	2	327	27	8,26±1,52	1,4	7,25	—	1,22	8,26±1,52	3,1	—	2,50
	3	339	29	8,55±1,51	1,6	6,19	0,59	0,59	7,08±1,39	2,5	1,74±0,65	2,99
Control		1317	77	5,85±0,64		2,28	0,15	0,91	3,34±0,51		2,51±0,50	3,28

* 1—350 r; 2—350 r + 10G; 3—350 r + 700 cps

Card 7/8

L 14288-66

ACC NR: AT6003872

Table 5. Effect on the bone marrow cells of mice of combined exposure to centrifugation or vibration followed by x-ray irradiation after 24 hours

Dry killed after exposure	Actions*	Cells examined: All	Cells examined: No. of disruptions	% Disruptions	R	% Chromosomal rearrangement: Bridge	Bridges with fragments	Fragments	% Rearrangement	R	% Adherence	Mitotic index
3rd	1	420	90	21,43±2,00	—	5,00	3,57	11,43	20,00±1,95	—	1,43±0,58	1,30
	2	75	14	18,66±4,43	—	9,31	2,68	5,31	17,30±4,37	—	1,33±1,32	0,54
	3	182	40	21,98±3,00	—	10,45	2,10	7,14	19,78±2,95	—	2,20±1,08	0,51
7th	1	620	121	10,24±1,57	—	8,90	1,43	7,70	18,12±1,51	—	1,11±0,41	2,30
	2	471	41	8,70±1,30	5,1	2,54	0,22	1,01	4,07±0,98	7	4,03±0,00	2,10
	3	291	25	8,59±1,64	4,7	4,12	—	1,37	5,50±1,33	6	3,09±1,01	0,49
15th	1	748	78	10,43±1,12	—	6,02	0,13	2,54	8,69±1,03	—	1,74±0,48	3,00
	2	390	36	8,75±1,41	1,1	3,33	0,25	2,56	6,15±1,10	1,6	3,03±0,87	2,72
	3	387	27	7,40±1,37	1,7	1,90	—	1,09	3,00±0,80	4,3	4,40±1,07	3,02
30th	1	648	68	10,03±1,15	3,1	6,64	0,20	2,36	9,20±1,11	4,9	0,74±0,33	2,29
	2	357	37	10,36±1,61	2,6	3,92	0,58	2,90	7,34±1,38	2,8	3,08±0,94	3,01
	3	363	43	11,23±1,61	3,1	4,60	0,26	2,61	7,57±1,35	2,0	3,66±0,95	3,03
Control		1317	77	5,85±0,64		2,28	0,15	0,01	3,34±0,51		2,51±0,50	3,28

* 1—350 r; 2-10 G + 350 r; 3-700 cps + 350 r

Card 6/8

L 14288-66

ACC NR: AT6003872

Table 4. Frequency of cell nucleus disruptions in the bone marrow after exposure to centrifugation for 30 min. and vibration for 60 min.

Dry killed after exposure	Magnitude	Cells examined: All	Cells examined: No. of disruptions	% Disruptions	R	% Chromosomal rearrangement: Bridges	Bridges with fragments	Fragments	% Rearrangement	Adherence	R	Mitotic index
1st	10G	503	33	6,56±1,11	—	0,00	—	1,19	2,19±0,65	4,37±0,91	—	2,41
	700cps	444	54	12,16±1,55	3,7	4,05	—	0,68	4,73±1,00	7,43±1,25	3,6	2,80
3rd	10G	800	60	6,75±0,84	—	2,36	—	0,78	3,15±0,68	3,60±0,82	1,4	2,64
	700cps	1020	120	11,76±1,00	4,0	4,12	0,49	1,18	5,69±0,73	5,98±0,74	3,8	2,83
7th	10G	784	44	5,61±0,82	—	3,44	0,38	0,89	4,72±0,78	0,80±0,33	—	2,44
	700cps	764	64	8,38±1,00	2,1	2,88	0,13	0,26	4,27±0,73	5,10±0,79	2,8	2,86
15th	10G	709	49	6,37±0,88	—	3,77	0,26	0,30	4,42±0,74	1,05±0,50	—	2,71
	700cps	420	28	6,10±1,16	—	1,17	—	1,88	3,05±0,83	3,05±0,83	—	2,84
30th	10G	505	45	8,91±1,28	2,2	2,37	0,19	0,05	3,51±0,82	5,35±1,00	2,5	2,69
	700cps	310	19	5,96±1,20	—	3,72	0,32	0,32	4,39±1,15	1,57±0,69	—	3,00
Control		1317	77	5,85±0,64	—	2,28	0,15	0,01	3,34±0,51	2,51±0,50	—	3,28

Card 5/8

L 14288-66
ACC NR: AT6003872

Table 3. Effect of combined exposure to centrifugation followed by irradiation on the bone marrow cells of mice

Killed after exposure	Actions*	Cells examined: All	Cells examined: No. of dividing cells	% Disruptions	R	% Chromosomal Rearrangement: Bridges + Bridges with fragments	% Chromosomal Rearrangement: Fragments	% Rearrangement	R	% Adherence	Mitotic Index
1 hr	1	121	62	51,24±4,51		12,40±2,08	34,71±4,53	47,11±4,51		4,13±1,81	0,53
	2	310	100	31,31±2,00	3,8	6,50±1,30	18,16±2,16	24,76±3,42	4,43	6,59±1,30	0,34
	3	471	217	46,07±2,20	1,01	7,43±1,21	31,84±2,13	39,27±2,25	1,76	6,70±1,17	0,46
4 hr	1	709	409	60,09±1,76		24,10±1,54	29,65±1,63	53,84±1,80		7,15±0,93	2,24
	2	790	350	45,81±1,79	6	12,00±1,18	20,02±1,41	32,11±1,70	3,5	13,39±1,22	1,11
	3	1314	450	34,25±1,50	5,5	10,12±0,83	18,20±1,07	28,30±1,25	11,0	5,80±0,63	1,70
2 days	1	273	23	8,42±1,68		3,60±1,12	1,10±0,63	4,70±1,28		3,66±1,12	2,10
	2	548	73	13,32±1,45		2,02±0,71	1,81±0,37	4,74±0,01		8,58±1,24	1,63
	3	1206	117	9,58±0,85		3,05±0,54	3,74±0,58	7,39±0,76		2,33±0,50	1,31
Control		1838	190	6,09±0,50		1,15±0,24	1,53±0,28	2,68±0,37		3,34±0,33	2,33

* 1—100 r; 2-3 0, 15 min, after 60 min, 100 r; 3-6 0 15 min, after 4 hr, 100 r

Card 4/8

L 14288-66
ACC NR: AT6003872

Table 2. Effect of combined exposure to centrifugation followed by irradiation on the bone marrow cells of mice

Killed after exposure	Action*	Cells examined: All	Cells examined: No. of disruptions	Disruptions %	R	Chromosomal rearrangement %: Bridges + bridges with fragments	Chromosomal rearrangement %: Fragments	Rearrangement %	Adherence %	R	Mitotic index
1 hr.	1	955	52	5.38±0.71	—	0.84±0.30	1.13±0.35	1.84±0.41	3.42±0.58	—	2.61
	2	1201	143	11.91±0.93	3.8	1.50±0.40	0.92±0.26	2.91±0.49	8.09±0.82	4.3	2.79
	3	806	93	11.79±1.13	3.6	2.23±0.51	1.36±0.41	3.59±0.66	8.19±0.88	4.0	1.51
4 hr	1	1129	121	10.71±0.92	3.1	1.03±0.41	0.71±0.29	2.38±0.45	8.32±0.82	5.3	1.36
	2	533	83	15.01±1.51	5.1	1.62±0.51	2.10±0.62	3.80±0.81	11.21±1.31	4.7	1.82
	3	1033	107	9.70±0.90	2.4	1.19±0.33	1.19±0.34	2.38±0.48	7.41±0.79	3.8	1.47
2 days	1	713	73	10.23±1.13	2.9	1.26±0.41	0.14±0.14	1.40±0.44	8.83±1.05	3.5	2.25
	2	548	48	8.76±1.21	1.7	1.10±0.45	0.73±0.10	1.82±0.57	6.93±1.03	1.9	2.17
	3	405	55	11.11±1.41	2.5	1.62±0.56	1.41±0.53	3.03±0.77	8.09±1.22	3.2	1.77
8 G control		949	59	6.21±0.78		0.94±0.30	0.95±0.31	1.79±0.42	4.42±0.66		2.43
20 G Control		1108	83	6.69±0.73		1.34±0.33	1.84±0.33	3.17±0.51	3.75±0.55		2.02

* 1—8 G, 5 min; 2—8 G, 15 min; 3—20 G, 5 min

Card 3/8

L 14288-66

ACC NR: AT6003872

Table 1. Frequency of cell nucleus disruptions in the bone marrow of mice exposed to 20 G

Killed after exposure	Action*	Cells observed: All	Cells observed: No. of disruptions	% Disruptions	R	% Chromosomal arrangement: Bridges + bridges with fragments	% Chromosomal arrangement: Fragments	% Chromosomal arrangement: % Rearrangement	R	% Adherence	Mitotic Index
1 hr	1	121	62	51,24±4,54	—	12,40±2,08	34,71±4,35	47,11±4,54	—	4,13±1,81	0,53
	2	200	103	54,00±3,52	0,4	5,50±1,60	35,00±3,43	43,50±3,50	0,6	10,50±2,16	0,25
	3	166	73	43,98±3,85	1,2	6,02±1,85	30,72±3,58	36,76±3,74	1,7	7,23±2,01	0,26
4 hr	1	709	469	60,00±1,76		24,19±1,5[illegible]	20,03±1,65	53,84±1,80		7,15±0,03	2,24
	2	1361	782	50,10±1,26	5	16,72±0,9[illegible]	23,07±1,07	39,78±1,24	6	10,31±0,77	1,67
	3	792	300	37,89±1,72	9	9,22±1,03	20,83±1,44	30,05±1,63	9	7,82±0,95	0,77
2 days	1	273	23	8,42±1,68		3,66±1,12	1,10±0,63	4,76±1,28		3,66±1,12	2,16
	2	629	44	6,99±1,01		1,27±0,45	3,49±0,73	4,76±0,85		2,22±0,52	1,65
	3	801	43	5,37±0,79		1,09±0,49	1,25±0,39	3,25±0,62		2,12±0,51	1,00
Control		1825	110	6,03±0,56		1,15±0,24	1,53±0,28	2,68±0,37		3,34±0,35	2,33

* 1—100 r; 2-20 G, 5 min, after 60 min, 100 hr

Card 2/8

L 14288-66 EWT(1)/FS(v)-3 SCTB DD/RD

ACC NR: AT6003872 SOURCE CODE: UR/2865/65/004/000/0373/0390

AUTHOR: Arsen'yeva, M. A.; Belyayeva, L. A.; Golovkina, A. V. 31 B+1

ORG: none

TITLE: Effect of combined exposure to acceleration, vibration, and radiation on bone marrow cell nuclei in mice 2, VC

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 373-390

TOPIC TAGS: mouse, radiation biologic effect, biologic acceleration effect, biologic vibration effect, cell physiology, bone marrow, x ray irradiation, mitosis

ABSTRACT: The mitotic activity of the bone marrow cells of mice exposed to the individual and combined effects of acceleration vibration and radiation was studied. The experimental parameters of the tests and their quantitative results are given in the following tables.

Card 1/8

erally irradiated with 500-1,000 r. The results showed that the foreign bodies and resultant tissue lesions had no appreciable effect on the course of radiation sickness, except for cases where the tissue was considerably destroyed or with purulent necrotic complication of the wound process. Mild and medium radiation sickness from general irradiation did not inhibit incapsulation of the foreign bodies, whereas severe radiation sickness inhibited it greatly. Radiation sickness from radioactive substances introduced directly into the tissues and organs inhibited the plastic process. Penicillin reduced the number of postvulneral complications, but streptomycin and other antibiotics could also be used instead. The authors conclude that surgical treatment for deep-lying foreign bodies, not removed during primary surgery, in persons affected by ionizing radiation should be governed simply by the clinical symptoms of vulneration. S.S. Sokolov, N.I. Blinov, V.G. Vaynshteyn, A.S. Rovnov, B.M. Khromov, A.D. Yarushevich and I.A. Meshcheryakov are listed as Soviet scientists who have studied combinations of radiation sickness with traumatic injuries.

SUBMITTED: April, 1959

Card 2/2

27.1220

25256 S/177/60/000/007/011/011
D264/D304

AUTHORS: Gal'chikov, V.I., Lieutenant Colonel, Slizkiy, I.S., Colonel, Tuzikov, A.V., Lieutenant Colonel, Belyayeva, L.A., and Shnyrenkova, O.V., Lieutenant Colonel (all Medical Corps)

TITLE: The "take" of foreign bodies in radiation sickness

PERIODICAL: Voyenno-meditsinskiy zhurnal, no. 7, 1960, 60-65

TEXT: The aim of the study was to determine the effects of radiation sickness on the "take" of foreign bodies (shrapnel, bullets) in the tissues. The combined action of the radiation factor and foreign body injuries was observed in rabbits. All rabbits were treated with antibiotics (penicillin) for 3 days after injury. The tests were arranged in the following series: 1) sterile and 2) staphylococcus-infected foreign bodies introduced into non-irradiated animals; 3) sterile and 4) infected foreign bodies into generally irradiated animals (1,000 r); 5) sterile foreign bodies into animals irradiated with Au^{198}; 6) gunshot wounding of rabbits gen-

Card 1/2

BELYAYEVA, L. A.

In testing the disc method, the medium proposed by V. A. Shorin (1956) containing 5% serum or blood with 1% glucose was used. It is mentioned that the serum or blood may be eliminated, but that the glucose is obligatory. Petri dishes were seeded with different concentrations of bacteria, after which cleared areas attributed to effects of the antibiotics were measured.

Results of 50 comparative analyses, presented in tabular form, show that the data corresponded in the majority of cases. It is concluded that, for determining the sensitivity of bacteria to antibiotics, the disc method was as effective as the serial dilution method, more convenient, and simpler. (U)

54M.1374

BELYAYEVA, L. A.

"Comparative Evaluation of the Sensitivity of Microorganisms to Antibiotics by Serial Dilutions and the Disc Method," by L. A. Belyayeva, Laboratory of the Main Military Hospital imeni N. N. Burdenko, Laboratornoye Delo, Vol 3, No 1, Jan/Feb 57, pp 36-37

The author recommends determination of bacterial sensitivity as a guide in designating antibiotics for various pathological conditions. The purpose of the research described was to compare results obtained by the method of serial dilution and by the use of discs of filter paper impregnated with antibiotics. Staphylococcus albus and aureus, gram-positive and gram-negative bacteria, etc., all isolated from mucus, pus, urine, and perspiration of patients with various diseases, were used as experimental subjects.

Serial dilutions were set up with Khottinger's bouillon containing 132 mg% ammine nitrogen and 1% glucose, with a pH of 7.2. Penicillin, streptomycin, biomycin, and levomycetin were introduced in increasing doses. Results were read after 16 hours of culturing at 37° C in test tubes.

SUM. 1314

GAMALEYA, A.N., polkovnik med.sluzhby, GYURDZHIAN, A.A., kapitan med. sluzhby, kand.med.nauk., SIMONOV, P.V., kapitan med.sluzhby, knad.med.nauk, BELYAYEVA, L.A.

Effect of ioznizing radiation on penicillin activity. Voen.med. zhur. no.11:33-36 N'56 (MIRA 12:1)
(PENICILLIN)
(RADIATION--PHYSIOLOGICAL EFFECT)

73. **Effect of Micerin on Microorganisms**

"Investigation of the Action of Micerin in Experiments in Vitro," by M. G. Glazman and L. A. Belyayeva, Hospital imeni Bauman and Main Military Hospital imeni Burdenko, Antibiotiki, Vol 1, No 5, Sep/Oct 56, pp 23-26

Investigations were conducted to determine the effect of the new antibiotic micerin on various microorganisms, as compared with that of penicillin, streptomycin, and biomycin. Cultures of Staphylococcus aureus, Bacillus coli, Proteus vulgaris, and a mixture of microorganisms consisting of gram-positive and gram-negative flora isolated from the sputum of patients were used in the tests. The investigations established: (1) micerin is a highly effective antibiotic against gram-positive and gram-negative microorganisms; (2) its effectiveness against these microorganisms is greater than that of the other antibiotics; (3) in doses of 0.3-5.0 grams per milliliter, micerin is effective against Bacillus coli, Proteus vulgaris, and staphylococci, microorganisms resistant to penicillin; and (4) it has a synergistic action in combination with penicillin, streptomycin, and biomycin. (U)

BELYAYEVA

Category: USSR/ Diseases of Farm Animals. Diseases of Undetermined Etiology. V-4

Abs Jour: Refer. Zhur-Biologiya, No 16, 1957, 72334

Author : Lazarevich P. L., Nikolaev, Mironyuk, Belyaeva
Inst : Not given
Title : The Use of Food Supplements In Enzootic Ataxia of Lambs.

Orig Pub: Tr. Dagestansk. S. Kh. In-ta, 1956, 8, 41-47

Abstract: The addition of fish fats, chalk, and bone meal to the ration of lambs with enzootic ataxia showed no healing effect. The administration of copper sulfate to lambs, with the severe form of the disease, produced no positive results. The results of some physiological and biochemical investigations are given and also the blood analysis of the ill lambs is cited.

Card : 1/1

USSR/ Microbiology. Antibiosis and Symbiosis. F-2
Antibiotics

Abs Jour: Ref Zhur - Biol., No 6, 1958, 24128

Abstract: the results of the method of serial dilutions. For testing microbial sensitivity by the disk method, the medium suggested by V. A. Shorin is utilized, to which must be added 1% glucose and facultatively 5% of serum or blood. The number of microorganisms must not exceed 500 million per ml of medium.

Card 2/2

BELYAEVA, L. A.

USSR/ Microbiology. Antibiosis and Symbiosis. F-2
Antibiotics

Abs Jour: Ref Zhur - Biol., No 6, 1958, 24128

Author : Belyaeva, L. A.
Inst : Not given
Title : Comparative Value of Determining Microbial Sensitivity to Antibiotics by Use of Serial Dilutions and With the Aid of Disks.

Orig Pub: Labor. delo, 1957, No 1, 36-37

Abstract: The method of determining the sensitivity to antibiotics of microbial associations, as well as of pure cultures of streptococci, white and aureous staphylococci, gram-positive and gram-negative bacilli isolated from patients, is simpler and more convenient if disks are used, and gives results which are almost in complete agreement with

Card 1/2

USSR/Microbiology - Antibiosis and Symbiosis. Antibiotics F-2

Abs Jour : Referat Zhurn - Biol. No 16, 25 Aug 1957, 68470

0.3- 5 γ/ml. A synergistic action of mycerin with penicillin and streptomycin was established. The most clearly evident synergistic effect was noted in combinations of mycerin with biomycin.

Card 2/2

BELYAYEVA, L.A.

USSR/Microbiology - Antibiosis and Symbiosis. Antibiotics F-2

Abs Jour : Referat Zhurn - Biol. No 16, 25 Aug 1957, 68470

Author : Glazman, M.G., Belyaeva, L.A.
Title : The Study of Mycerin Activity in Experiments in Vitro.

Orig Pub : Antibiotiki, 1956, 1, No 5, 23-26

Abstract : Of 36 cultures of staphylococci isolated from patients, 35 were sensitive to mycerin, 10 to penicillin, 23 to streptomycin, 31 to biomycin. Of 27 strains of intestinal bacilli, 21 were sensitive to mycerin, 7 to streptomycin, 10 to biomycin. Not a single one was penicillin sensitive. Of 94 microbial associations (isolated from the mucus of patients and consisting of grampositive and gramnegative flora), 77 were sensitive to mycerin, 2 to penicillin, 32 to streptomycin, 49 to biomycin. Of 9 penicillin-resistant strains of proteus vulgaris, 7 were sensitive to mycerin, 4 to streptomycin and 1 to biomycin. Mycerin was used in concentrations of

Card 1/2

BELYAYEVA, L. A.

Stability of the antimicrobial properties of biomycin was also investigated. In this way, the precision of the method developed was again verified.

The work mentions that the original method for determining the concentration of biomycin by total fluorescence (developed by Ye. N. Druzhinina in this laboratory) is based on the relation of the magnitude of the degree of activity of biomycin, determined by the agar-diffusion method, to the degree of intensity of the fluorescence of biomycin in the filtered ultraviolet light of a Bud lamp.

The following conclusions are presented on the basis of these experiments:

"1. Biomycin is a highly active antibiotic which has a wide antimicrobial spectrum. Its active concentration in the experiments described with respect to various disease pathogens fluctuates from 0.07 to 10 units/ml.

"2. Conditions for standardizing biomycin by the agar-diffusion method have been established. The lowest concentration determined by this method was one unit/ml." (U)

Sum. 1360

BELYAYEVA, L.A.

It was found that gram-positive and gram-negative, spore-forming and non-spore-forming, obligate aerobic and anaerobic microorganisms were sensitive to very low concentrations of biomycin. The article notes high activity with respect to pathogens of dysentery, cholera, and gas gangrene. It states that these spectra cannot be used for strandardizing commercial preparations. The agar-diffusion method developed and tested for this purpose is described. Comparative sensitivity of several microorganisms to biomycin as determined by this method is presented in a table. The capacity of various buffer solutions to diffuse in agar was calculated according to the size of the area in which growth of test microorganisms was suppresed, and according to the clearness of this area. Average results of these experiments are shown in another table. A fourth gives results of experiments which established that a buffer solution containing phosphate (Na_2HPO_4 in a 0.2 M and 0.1M solutions of citric acid) increases the diameter of the cleared area. Results of a number of experiments with various media in which the size and clearness of the area of suppression of growth of test microorganism E_2 was calculated are shown in a fifth table.

The work states that the agar-diffusion method described herein is used for standardizing commercial preparations, and instructions for control are designated.

Sum. 1360

BELYAYEVA, L.A.

"The Antimicrobial Activity of Biomycin," by L. M. Yakobson, I. S. Buyanovskaya, L. A. Belyayeva, and Ye. V. Kubshinova, All-Union Scientific Research Institute of Antibiotics, Biomitsin (Biomycin), Medgiz, Moscow, 195-, pp 7-15

This work discusses methods developed to determine the antimicrobial spectrum of biomycin. Activity of the drug was considered from two aspects: (1) the range of action was investigated to determine the antimicrobial activity of the drug, and; (2) conditions for standardizing commercial biomycin were established. The spectrum was explored according to the usual technique employed in studying drugs with unknown ranges of activity; this technique is described in detail in the text.

The activity of biomycin on anaerobic cultures was tested on a Tarozzi medium covered with a layer of vaseline. Results were calculated according to the completeness of the suppression of growth after the test cultures had been kept at 37° for 18-20 hours. Average data collected in numerous experiments are presented in a table, which shows the lowest concentration in units/ml which suppressed the growth of 35 microorganisms -- typhoid, paratyphoid, and dysentery bacilli, Vibrio cholera, Staphylocci, B. coli, B. anthracoides, B. mycoides, B. perfringens, and others.

Sum. 1360

SOCHILOVA, A.A.; BUYANOVSKAYA, I.S.; KENINA, A.Ye.; DMITRIYEVA, V.S.; FURER, N.M.; BELYAYEVA, L.A.; KUVSHINOVA, Ye.V.; VAKULENKO, N.A.; ZAMUKHOVSKAYA, A.N.; LEONOVA, A.G.

Agar diffusion method for determining the activity of antibiotics. Trudy VNIIA no.1:10-26 '53. (MLRA 8:1)
(Antibiotics--Testing) (Bacteriology--Culture and culture media)

BELYAYEVA, K.V.

Nematodes of the rubber-bearing plants tau-saghyz and krym-saghyz.
Trudy SAGU no.32:97-107 '52. (MLRA 9:5)
(Soviet Central Asia--Nematoda) (Parasites--Rubber plants)

BELIAEVA, K. V.

RT-1530 (On the problem of distribution of nematodes in the soil, root and above-ground parts of plants) K voprosu o raspredelenii nematod v pochve kornevoi i nadzemnoi chastiakh rastenii.
TRUDY ZOOLOGICHESKOGO INSTITUTA AKADEMII NAUK SSSR 9(2): 613-624, 1951

BELYAYEVA, K.V., dotsent, kandidat biologicheskikh nauk.

Data on nematodes in alfalfa fields of Uzbekistan. Biul SAGU no.28:47-54 '49. (MLRA 9:5)

(Uzbekistan--Nematoda) (Alfalfa--Diseases and pests)

BELYAYEVA, K.P.; RASKIN, Ya.L.; BERLIN, A.A.

Polyester acrylates as film-forming materials. Report No. 1: Polyester acrylates as film-forming materials in lacquers for wood finishing. Lakokras. mat. i ikh prim. no. 6:5-11 '60.
(MIRA 13:12)

(Acrylic acid) (Lacquers and lacquering)

BELYAYEVA, K.P.; GROZOVSKAYA, A.M.; ALEKSEYEV, I.M.; PICHUGIN, S.M.;
Prinimali uchastiye: ASTAKHOVA, G.V.; TSAREVA, Ye.G.; KORZINA, G.P.

VL-08 wash primer. Lakokras.mat.i ikh prim. no.3:23-25 '60.
(MIRA 14:4)

(Protective coatings) (Phosphoric acid)

RASKIN, Ya.L.; ERMAN, V.Yu.; BELYAYEVA, K.P.; BERLIN, A.A.

Use of polyester acrylates as film-forming agents. Report No. 2: Film-forming capacities of polyester acrylates. Lakokras.mat i ikh prim. no.2:21-26 '61. (MIRA 14:4)
(Acrylic acid) (Films (Chemistry))

BELYAYEVA, Klavdiya Pavlovna; USPENSKIY, I.A., red.; SHPAK, Ye.G., tekhn.red.

[Paint materials for finishing articles of wood] Lakokrasochnye materialy dlia otdelki izdelii iz dereva. Moskva, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1960. 73 p. (MIRA 13:7)

(Wood finishing) (Paint materials)

resistance. Lead and strontium chromes [Ref 24, 25] are stable in the acidic diluent for 18 months so that no mixing of the components before application is needed. The protective properties of the primers have been investigated by GIPI-4 [Ref 29]. They depend on the dispersion of the zinc chrome and the thickness of the applied layer. The optimum thickness is 6 - 10 μ. The protective effect of a parkerizing layer is shown in Figures 1 - 5. In the USSR a two-component primer VL-08 consisting of a rolled paste of aqueous zinc chrome with polyvinylbutyral is being produced. It is mixed with an acid diluent at the ratio 4 : 1.

There are 5 sets of photos and 30 references, 8 of which are Soviet, 15 English, 5 German, 1 French and 1 Swiss.

5(2)

SOV/63-4-3-11/31

AUTHORS: Belyayeva, K.P., Candidate of Technical Sciences, Grozovskaya, A.M.

TITLE: Phosphating Primers

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 3, pp 355-360 (USSR)

ABSTRACT: Parkerizing of metal surfaces before painting ensures a high corrosion resistance of the coating. The similarity of the crystal lattices of iron and the phosphate of iron protoxide is the base for the good adhesion [Ref 1]. Parkerizing by means of heated phosphoric salt solution is possible only in tanks and drying chambers. "Cold" parkerizing produces inferior protective coatings. Phosphating primers have been developed, therefore, which are applied together with the paint. They consist of a suspension of zinc tetraoxychromate in polyvinylbutyral and an acidic diluent which is an alcoholic solution of o-phosphoric acid. The primary alcohols reduce Cr^{6+} to Cr^{3+} which reacts with the free phosphoric acid forming a complex chromophosphate salt. The ratio $H_3PO_4 : CrO_3$ should be higher than 1.5 in order to obtain good adhesion. The optimum value is 2, the pH value of the primer is then 2.7 - 3. Pigments in the primer increase its water and corrosion

Card 1/2

BELYAYEVA, K.P.

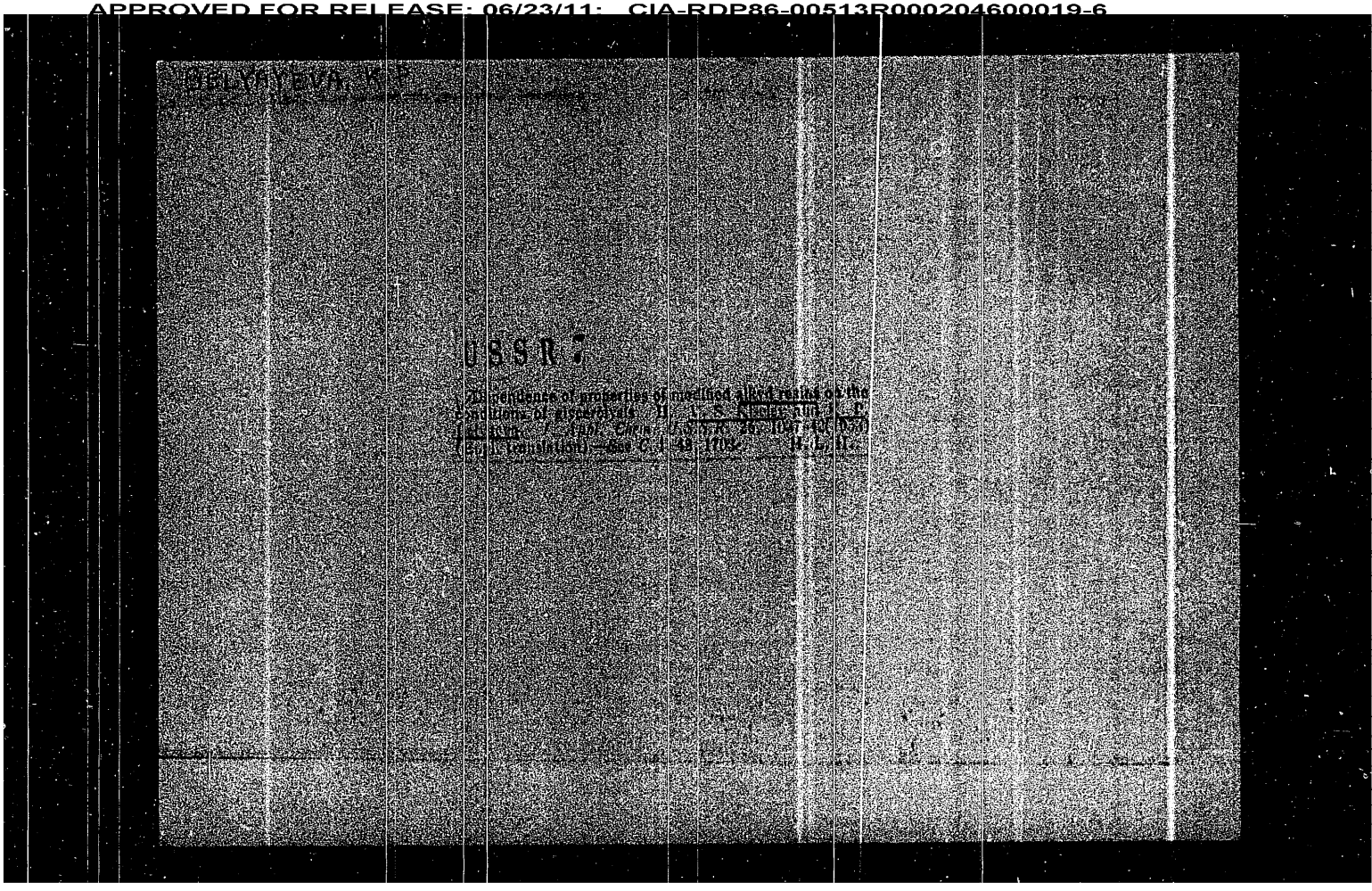
Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Paints, Varnishes, Lacquers, and Inks

3

(8) Alkyd

Dependence of properties of modified alkyd resins on the conditions of glycerolysis. II. V. S. Kiselev and K. P. Belyaeva. *Zhur. Prikład. Khim.* 26, 1098-1102(1953); cf. 10860g.—The film-forming properties of modified glyptals obtained from mono- and dioleins by treatment at 150° with phthalic anhydride, followed by heating to 250°, were examd. Best films were obtained from monoölein and from mixed mono- and dioleins with free glycerol present. The presence of free glycerol in the initial formulation is thus quite beneficial. The glycerolysis reaction is best run up to the formation of 50% monoglycerides and the maintenance of excess glycerol at about 14% (1 mole); under such conditions, after the 250° treatment, the product is sol. in 95% EtOH to the extent of 1:10. A lower content of glycerol causes poorer film formation. The glycerolysis is best run in hermetically closed app. G. M. Kosolapoff

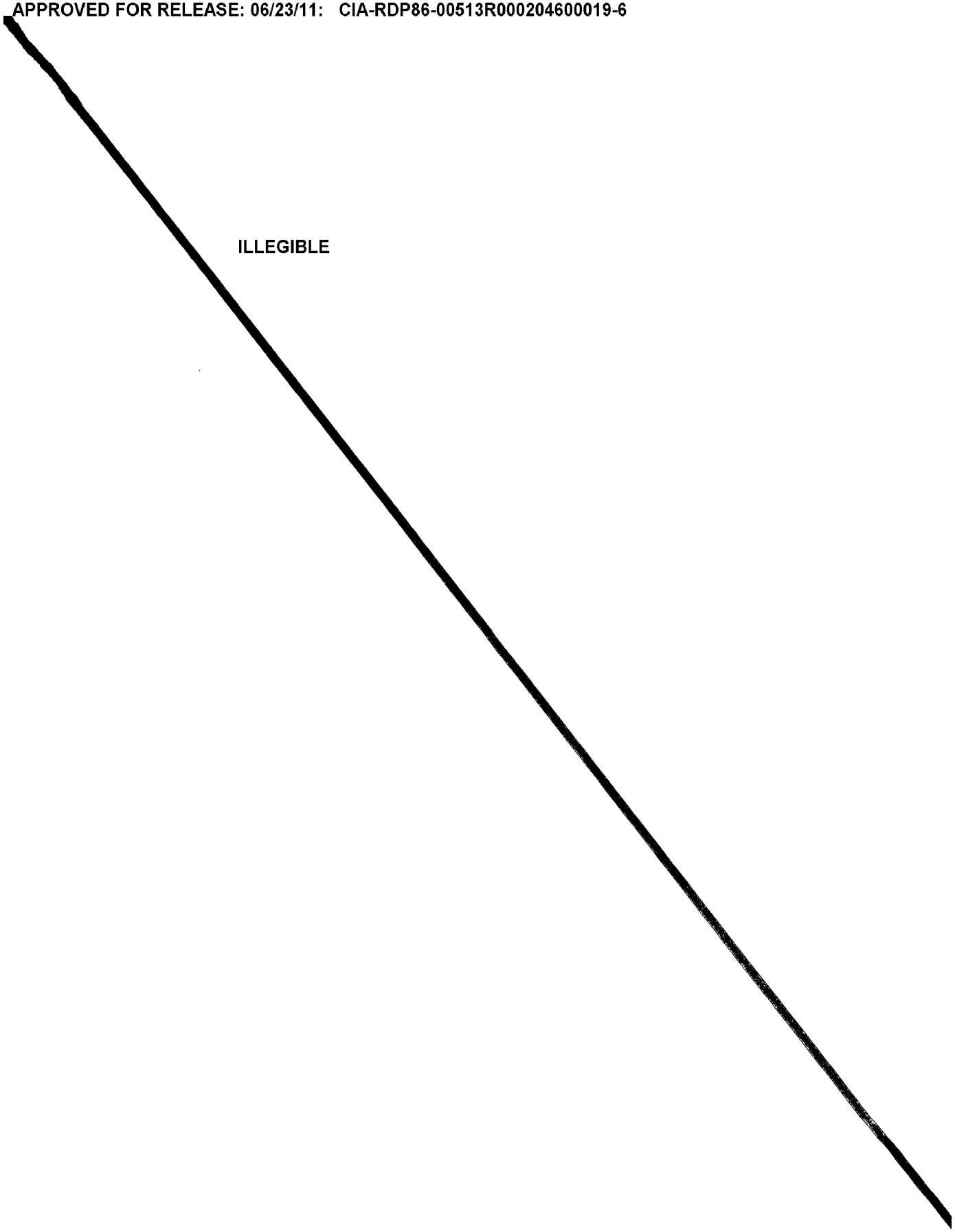
9-9-54



KISELEV, V.S.; BELYAYEVA, K.P.

Dependence of the properties of modified alkyd resins on the conditions of glycerolysis. Zhur. Priklad. Khim. 26, 518-23 '53. (MLRA 6:5)
(CA 47 no.20:10866 '53)

ILLEGIBLE

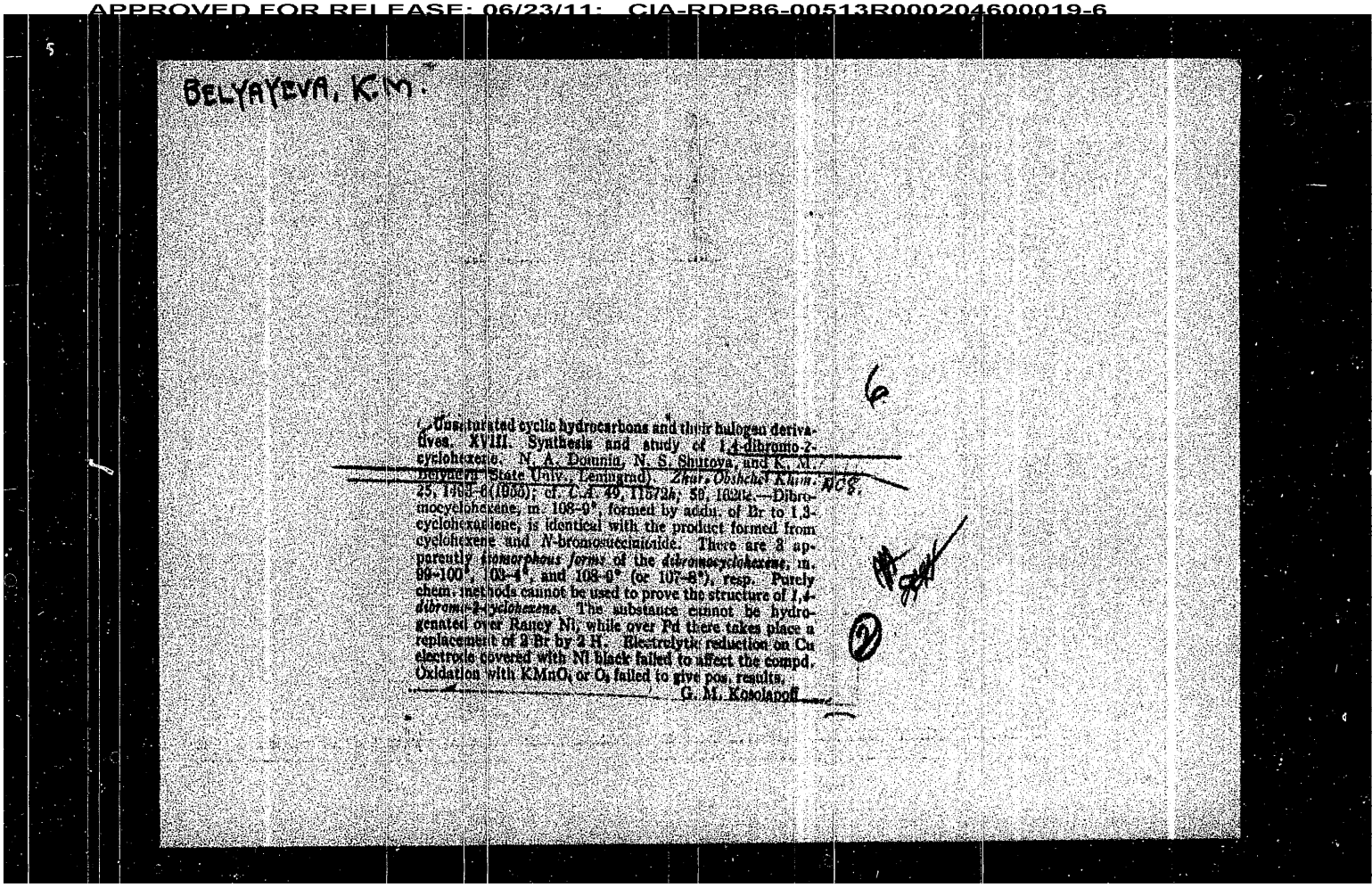


BELYAYEVA, K. P.

"Dependence of the Properties of Modified Glyptal Resins on the Conditions of Glycerolysis." Sub 28 Nov 51, Moscow Order of Lenin Chemicotechnological Inst imeni D. I. Mendeleyev.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.



BELYAYEVA, K.M.

Unsaturated cyclic hydrocarbons and their halogen derivatives. XVIII. Synthesis and study of 1,4-dibromo-2-cyclohexene. N. A. Domnin, N. S. Shurova, and K. M. Belyaeva (State Univ., Leningrad). *Zhur. Obshchei Khim.* 25, 1063-6 (1955); cf. *C.A.* 49, 11573h; 50, 10201e.—Dibromocyclohexene, m. 108-9°, formed by addn. of Br to 1,3-cyclohexadiene, is identical with the product formed from cyclohexene and *N*-bromosuccinimide. There are 3 apparently *dimorphous forms* of the *dibromocyclohexene*, m. 99-100°, 102-4°, and 108-9° (or 107-8°), resp. Purely chem. methods cannot be used to prove the structure of *1,4-dibromo-2-cyclohexene*. The substance cannot be hydrogenated over Raney Ni, while over Pt there takes place a replacement of 2 Br by 2 H. Electrolytic reduction on Cu electrode covered with Ni black failed to affect the compd. Oxidation with $KMnO_4$ or O_3 failed to give pos. results.

G. M. Kosolapoff

BELYAYEVA, K.I.; GAYLIK, Ye.A.; ABRAMOV, S.A., dotsent

Efforts to improve the quality of production. Tekst. prom. 25 no.5:9-10 My '65. (MIRA 18:5)

1. Inspektor Inspektsii po kachestvu pri Leningradskom sovete narodnogo khozyaystva (for Belyayeva). 2. Starshiy inzh. Upravleniya legkoy promyshlennosti Litovskogo soveta narodnogo khozyaystva (for Gaylik). 3. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti (for Abramov).

BELYAYEVA, K.I.

Conference on problems of mechanizing and automatizing industrial processes. Tekst.prom. 18 no.12:66 D '58. (MIRA 11:12)
(Textile machinery)

ALEKSANDROV, B.M. --- (continued) Card 2.

1. Russia (1917- R.S.F.S.R.) Karel'skiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. 2. Karel'skoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva (for Aleksandrov, Aleksandrova, Belyayeva, Gorbunova, Gordeyeva-Pertseva, Gordeyeva, Gulyayeva, Dmitrenko, Zabolotskiy, Makarova, Novikov, Pokrovskiy, Smirnov, Stefanovskaya, Urban). 3. Karel'skiy filial AN SSSR (for Balagurova, Veber, Potapova, Sokolova, Filimonova, Popenko).

(Karelia--Lakes)

ALEKSANDROV, B.M., nauchnyy sotrudnik; ALEKSANDROVA, T.N., nauchnyy sotrudnik; BELYAYEVA, K.I., nauchnyy sotrudnik; GORBUNOVA, Z.A., nauchnyy sotrudnik; GORDEYEVA-PERTSEVA, L.I., nauchnyy sotrudnik; GORDEYEVA, L.N., nauchnyy sotrudnik; GULYAYEVA, A.M., nauchnyy sotrudnik; DMITRENKO, Yu.S., nauchnyy sotrudnik; ZABOLOTSKIY, A.A., nauchnyy sotrudnik; MAKAROVA, Ye.F., nauchnyy sotrudnik; NOVIKOV, P.I., nauchnyy sotrudnik; POKROVSKIY, V.V., nauchnyy sotrudnik; SMIRNOV, A.F., nauchnyy sotrudnik; STEFANOVSKAYA, A.F., nauchnyy sotrudnik; URBAN, V.V., nauchnyy sotrudnik. Prinimali uchastiye: BALAGUROVA, M.V., nauchnyy sotrudnik; VEBER, D.G., nauchnyy sotrudnik; POTAPOVA, O.I., nauchnyy sotrudnik; SOKOLOVA, V.A., nauchnyy sotrudnik; FILIMONOVA, Z.I., nauchnyy sotrudnik; POPENKO, L.K., nauchnyy sotrudnik. ZYTSAR', N.A., red.; PRAVDIN, I.F., red.; PANKRASHOV, A.P., red.; SHEVCHENKO, L.V., tekhn.red.

[Lakes of Karelia; natural features, fishes, and fisheries] Ozera Karelii; priroda, ryby i rybnoe khoziaistvo; spravochnik. Petrozavodsk, Gos.izd-vo Karel'skoi ASSR, 1959. 618 p. (MIRA 13:8)

(Continued on next card)

BELYAYEVA, K. I.

Belyayeva, K. I. -- "Ecological and Biological Characteristics of Large Sea Eels from the Lakes of the Karelo-Finnish SSR." Cand Biol Sci, Karelo-Finnish State U, 26 Jan 54. (Laninskeye Znamya, 17 Jan 54)

SO: SUM 168, 22 July 54